

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Kazuhiro YOSHINAGA et al. : **Mail Stop: PCT**  
Serial No. 10/579,978 : Attorney Docket No. 2006\_0777A  
Filed May 22, 2006 :  
EFFICIENT PRODUCTION :  
METHOD OF ASCOPYRONE P :  
[Corresponding to PCT/JP2004/017513  
Filed November 18, 2004]

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEE FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975.

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☒ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application PCT/\_\_\_\_\_; and/or
- ☐ each reference previously cited in prior parent application Serial No.

1a. ☒ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, or

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

**and thus no certification and/or fee is required.**

1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

**the certification of paragraph 2 below is provided, and**

**the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.**

2. It is hereby certified

a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or

b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

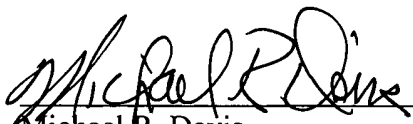
3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
  - b. ☐ a foreign patent office search report (in the English language) submitted herewith,
  - c. ☒ the concise explanation contained in the specification of the present application at page 2,
  - d. ☒ the concise explanation set forth in the attached English language abstract,
  - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☒ A foreign patent office search report (International Search Report) citing one or more of the references is of record.
6. ☒ Comments:

Although not cited on the attached PTO-1449 form, Applicants are submitting herewith a copy of the first page of the first page of WO 95/10616, which corresponds to the JP 9-505988 reference cited on the PTO-1449 form. The first page of WO '616 will serve as an English abstract of JP '988.

Respectfully submitted,

Kazuhiro YOSHINAGA et al.

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August 10, 2006

## INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT(S)  
(Use several sheets if necessary)

Date Submitted to PTO: August 10, 2006

ATTY DOCKET NO.  
2006\_0777ASERIAL NO.  
10/579,978APPLICANT  
Kazuhiro YOSHINAGA et al.FILING DATE  
May 22, 2006

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	2003/0203963	10/2003	Elsser et al.			
	AB						
	AC						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AD	00/56838	9/2000	WO			
	AE	02/26060	4/2002	WO			
	AF	02/26061	4/2002	WO			
	AG	03/038085	5/2003	WO			
	AH	03/038107	5/2003	WO			
	AI	03/038084	5/2003	WO			
	AJ	2001-89377	4/2001	Japan			
	AK	9-505988	6/1997	Japan			
	AL	2002-27945	1/2002	Japan			

## OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AM	Fred Shafizadeh et al., "1,5-Anhydro-4-Deoxy-D-glycero-Hex-1-en-3-Ulose and Other Pyrolysis Products of Cellulose", Carbohydrate Research 67, pages 433-447, 1978.
	AN	Marie-Antionette Baute et al., "Enzymic Activity Degrading 1,4- $\alpha$ -D-Glucans to Ascopyrones P and T in Pezizales and Tuberales", Phytochemistry, Vol. 33, No. 1, pages 41-45, 1993.
	AO	Tania Ahmad, "Studies on the Degradation of Some Pentoses and of 1,5-Anhydro-D-Fructose, The Product of the Starch-Degrading Enzyme $\alpha$ -1,4-Glucan Lyase", Phd Thesis, The Swedish University of Agricultural Sciences, Sweden, pages 1-34, 1995.
	AP	Stefan Freimund et al., "Dimeric structures of 1,5-anhydro-D-fructose", Carbohydrate Research, 308, pages 195-200, 1998.

EXAMINER

DATE CONSIDERED